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EXAMINER

SHELEHEDA, JAMES R

ART UNIT

PAPER NUMBER

2614

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Please find below and/or attached an Office communication concerning this application or proceeding.

DM

Office Action Summary	Application No. 09/742,623	Applicant(s) CROCITTI ET AL.	
	Examiner James Sheleheda	Art Unit 2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 December 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings

1. The drawings are objected to because legends should be drawn to the blank boxes. See 37 CFR 1.84(o). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application.

The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claim 3 is objected to because of the following informalities:

Claim 3 is incorrectly dependent upon claim 1. In claim 3, line 1, "claim 1" should be changed to --claim 2--.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoneda (6,660,251) in view of Deniau et al. (Deniau) (EP823798A1).

As to claim 1, Yoneda discloses a process for constructing databases for digital television services (column 1, lines 9-19), wherein it comprises:

a step of tuning by the tuner (Fig. 1, receiving unit 1; column 5, lines 44-47) to a carrier frequency (Fig. 57(b)); a transport stream containing a plurality of channels; column 2, lines 3-14);

a step of filtering by a demultiplexer (separating unit, 2) the signal received by the tuner tuned to a given carrier frequency (by extracting particular PIDs of the received transport stream; column 5, lines 48-56);

a step of extracting the data representing the information table (NIT table) of the current network (column 61, lines 63-65); and

a step of extracting the data representing the service table (column 62, lines 4-5);

While Yoneda discloses the processing of NIT (column 61, lines 66-67 and column 62, lines 1-3) and SDT (column 62, lines 2-10) tables which each contain the trio of the table, the carrier frequency (transport stream ID, Fig. 56) and a table identifier (table ID; Fig. 56), he fails to specifically disclose the storing of the extracted data.

In an analogous art, Deniau discloses a digital cable receiver (Fig. 1, page 3, line 19) utilizing received service data (page 2, lines 3-5, page 3, lines 7 and Fig. 5) wherein the service data is filtered from a received stream (page 2, line 21) and stored in a database (page 2, line 22) for later transfer to client applications (page 4, lines 6-9) for the typical advantage of allowing easy access to these data tables at a later time.

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Yoneda's system to include the storing of the extracted data, as taught by Deniau, for the typical advantage of allowing easy access to these data tables at a later time.

As to claim 7, Yoneda discloses a receiver of digital television transmissions (Fig. 1) comprising a memory (identification information storage unit, 5), means of reception (receiving unit, 1) making it possible to filter and to extract from a signal (by extracting particular PIDs of the received transport stream using separating unit 2; column 5, lines 48-56) transmitted on a carrier (Fig. 57(b); a transport stream containing a plurality of channels; column 2, lines 3-14), data representing the network information table (column 61, lines 63-65).

While Yoneda discloses wherein the network information table contains the trio of the information table (NIT table; Fig. 56; column 61, lines 63-65), the carrier frequency corresponding to the network whose information table is extracted (transport stream ID, Fig. 56) and an identifier of the table (table ID; Fig. 56), he fails to specifically disclose wherein the extracted data is stored in a database in memory, means for updating the data of the database, means for injecting the tables into the interface of the application program of the demultiplexer so as to select the filter appropriate to the desired channel or means for copying into the MPEG stack of the operating system the database data provided for a given carrier frequency.

In an analogous art, Deniau discloses a digital cable receiver (Fig. 1, page 3, line 19) utilizing received service data (page 2, lines 3-5, page 3, lines 7 and Fig. 5)

wherein extracted service data is stored in a database (page 2, line 22) which has the means to be updated (page 4, lines 50-53 and lines 15-18);

means for injecting (a program running on microprocessor 23) the sections (or tables) into the interface of the application program of the demultiplexor (or program controlling the demultiplexor; wherein the management module access lists in memory containing the service data to find the correct information; page 8, lines 39-52) so as to select the filter appropriate to the desired channel (page 8, line 52);

and means for copying into the MPEG stack of the operating system (or MPEG buffer) the database data provided for a given carrier frequency (page 4, lines 13-18 and page 3, lines 49-51) for the typical advantages of allowing easy access to the most current data tables at a later time; enabling the demultiplexor to correctly filter the correct information from the data channel; and providing the stored data in a buffer for use by applications.

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Yoneda's system to include wherein the extracted data is stored in a database in memory, means for updating the data of the database, means for injecting the tables into the interface of the application program of the demultiplexor so as to select the filter appropriate to the desired channel or means for copying into the MPEG stack of the operating system the database data provided for a given carrier frequency, as taught by Deniau, for the typical advantages of allowing easy access to the most current data tables at a later time; enabling the demultiplexor to correctly filter the correct information from the data channel; and providing the stored data in a buffer for use by applications.

As to claim 8, Yoneda and Deniau disclose wherein the selected table segment is injected by injection means into the buffer of the channel of the decoder constituting an MPEG stack (see Deniau at page 4, lines 13-18 and page 3, lines 49-51).

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoneda and Deniau as applied to claim 1 above, and further in view of Suzuki et al. (Suzuki) (5,864,358).

As to claim 4, while Yoneda and Deniau disclose the searching by the tuner to a frequency and the performing of steps b) to f) for that frequency, they fail to specifically disclose the repetition of the steps for the whole frequency span.

In an analogous art, Suzuki discloses a digital broadcasting system (Fig. 1) utilizing program tables (column 8, lines 44-46) wherein, at power up, program tables for a physical channel are extracted and stored (column 17, lines 1-13) and a demodulation section will sequentially cycle through every tunable physical channel (or carrier frequency) and repeat the extraction and storing for each physical channel (column 17, lines 1-13) for the typical advantage of creating an initial database of all received program tables for later use by the receiver (column 17, lines 14-28).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Yoneda and Deniau's system to include the repetition of the steps for the whole frequency span, as taught by Suzuki, for the typical advantage of creating an initial database of all received program tables for later use by the receiver.

6. Claims 2, 5, 6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoneda and Deniau as applied to claim 1 and 7 above, and further in view of Sinclair (US2001/0011334A1).

As to claim 2, while Yoneda and Deniau disclose storing obtained data in a database in memory, they fail to specifically disclose wherein the stored data is compressed.

In an analogous art, Sinclair discloses a memory device for storing data (paragraph 1) wherein data is stored in compressed form (paragraph 2) for the typical advantage of increasing the amount of data which can be stored in a storage device (paragraph 2, lines 3-9).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Yoneda and Deniau's system to include wherein the stored data is compressed, as taught by Sinclair, for the typical advantage of increasing the amount of data which can be stored in a storage device.

As to claim 5, while Yoneda and Deniau disclose the use of the process in a services installation procedure (a procedure to provide service data to various applications, see Deniau at page 3, lines 45-51), wherein it consists of interrogating for a given carrier frequency the content of a database (see Deniau at page 4, lines 13-15) so as to extract therefrom the service information table (see Deniau at page 4, lines 13-15); and a step of dispatching the network information table and the SDT service table

to buffers for use by the decoder (See Deniau at page 4, lines 13-18), they fail to specifically disclose wherein the network information table and the SDT service table are decompressed.

In an analogous art, Sinclair discloses a memory device for storing data (paragraph 1) wherein data is stored in a compressed form to enable more data to be stored (and inherently decompressed later to provide access; paragraph 2) for the typical advantage of enabling the use of compressed data.

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Yoneda and Deniau's system to include wherein the stored data is compressed, as taught by Sinclair, for the typical advantage of enabling the use of compressed data.

As to claim 6, while Yoneda and Deniau disclose storing the trio of information, they fail to specifically disclose the use of the process in a procedure for maintaining the database section, wherein it consists of running a database construction procedure for a given carrier frequency and in verifying that the version of the network information tables obtained by the procedure is higher than the version recorded in the database and the storing of the new trio of information in compressed form.

In an analogous art, Deniau further discloses a digital cable receiver (Fig. 1, page 3, line 19) wherein an application requests the most recent version of service data (page 4, lines 21-24 and lines 36-39) and the version number of incoming service data is compared to the versions contained in a database (page 4, lines 48-55), so when the

received version is higher then the current version the higher version will be stored (page 4, lines 50-53 and lines 15-18), for the typical advantage of ensuring that the most current data is stored.

Additionally, in an analogous art, Sinclair discloses a memory device for storing data (paragraph 1) wherein data is stored in compressed form (paragraph 2) for the typical advantage of increasing the amount of data which can be stored in a storage device (paragraph 2, lines 3-9).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to further modify Yoneda and Deniau's system to include the use of the process in a procedure for maintaining the database section, wherein it consists of running a database construction procedure for a given carrier frequency and in verifying that the version of the network information tables obtained by the procedure is higher than the version recorded in the database and the storing of the new trio of information, as taught by Deniau, for the typical advantage of ensuring that the most current data is stored.

Additionally, it would have been obvious to one of ordinary skill in the art at the time of invention by applicant to further modify Yoneda and Deniau's system to include wherein the stored data is compressed, as taught by Sinclair, for the typical advantage of increasing the amount of data which can be stored in a storage device.

As to claim 9, while Yoneda and Deniau disclose wherein the database comprises the data of the network information table (NIT table; See Yoneda at Fig. 56;

column 61, lines 63-65), the frequency of the carrier (transport stream ID, See Yoneda at Fig. 56) and an identifier (table ID; see Yoneda at Fig. 56); and the data of the SDT services table (SDT table; see Yoneda at Fig. 56; column 62, lines 4-5), the frequency of the carrier (transport stream ID, see Yoneda at Fig. 56) and an identifier (table ID; see Yoneda at Fig. 56), they fail to specifically disclose wherein the data is compressed.

In an analogous art, Sinclair discloses a memory device for storing data (paragraph 1) wherein data is stored in compressed form (paragraph 2) for the typical advantage of increasing the amount of data which can be stored in a storage device (paragraph 2, lines 3-9).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Yoneda and Deniau's system to include wherein the stored data is compressed, as taught by Sinclair, for the typical advantage of increasing the amount of data which can be stored in a storage device.

7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoneda, Deniau and Sinclair as applied to claim 2 above, and further in view of Burrows et al. (Burrows) (5,745,894).

As to claim 3, while Yoneda, Deniau and Sinclair disclose a compression step storing the information in a database, they fail to specifically disclose the storing of a key derived from the carrier frequency.

In an analogous art, Burrows discloses a method of indexing a database (column 1, lines 7-9) wherein an index (or key), stored in memory (column 1, lines 64-65), is

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created identifying information contained in the database (column 1, lines 65-67) and the location of that information (column 1, lines 65-67 and column 2, lines 1-3) for the typical advantage of providing a way to easily search entries in a database.

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Yoneda, Deniau and Sinclair's system to include the storing of a key derived from the carrier frequency, as taught by Burrows, for the typical advantage of providing a way to easily search entries in a database.

Conclusion

8. The following are suggested formats for either a Certificate of Mailing or Certificate of Transmission under 37 CFR 1.8(a). The certification may be included with all correspondence concerning this application or proceeding to establish a date of mailing or transmission under 37 CFR 1.8(a). Proper use of this procedure will result in such communication being considered as timely if the established date is within the required period for reply. The Certificate should be signed by the individual actually depositing or transmitting the correspondence or by an individual who, upon information and belief, expects the correspondence to be mailed or transmitted in the normal course of business by another no later than the date indicated.

Certificate of Mailing

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

on _____.
(Date)

Typed or printed name of person signing this certificate:

Signature: _____

Certificate of Transmission

I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office, Fax No. (703)_____ - _____ on _____.
(Date)

Typed or printed name of person signing this certificate:

Signature: _____

Please refer to 37 CFR 1.6(d) and 1.8(a)(2) for filing limitations concerning facsimile transmissions and mailing, respectively.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Sheleheda whose telephone number is (703) 305-8722. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the primary examiner, Chris Grant can be reached on (703) 305-4755. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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James Sheleheda
Patent Examiner
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JS


CHRIS GRANT
PRIMARY EXAMINER